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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,756	06/23/2003	Sung-Deuk Kim	P-0554	5728

34610 7590 01/23/2008

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EXAMINER	
WONG, BLANCHE	

ART UNIT	PAPER NUMBER
2619	

MAIL DATE	DELIVERY MODE
01/23/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/600,756	KIM, SUNG-DEUK	
	Examiner	Art Unit	
	Blanche Wong	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 November 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-6,9-11,13-23 and 26-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-6,9-11,13-23 and 26-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The finality of the last Office action is withdrawn.

Response to Arguments

2. Applicant's arguments with respect to claims 1,4-6,9-11,13-23,26-34 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claim 17 is objected to because of the following informalities: Examiner suggests replacing 1) "inserting a substitute data block" in lines 4-5 with "inserting a substitute data block in the error data block", and 2) "the data block" in lines 4,6,7,9, with "the error data block" for clarity and in consistent with Amendment under 37 C.F.R. 1.116 dated November 29, 2007. Appropriate correction is required.

4. Claim 28 is objected to because of the following informalities: Examiner suggests replacing 1) "inserting a substitute data block" in lines 5-6 with "inserting a substitute data block in the error data block", 2) "the data block in lines 5 and 6, with "the error data block", and 3) "a missing transmission sequence number" in lines 6-7 with "a missing transmission sequence number corresponding to the error data block" for clarity and in consistent with Amendment under 37 C.F.R. 1.116 dated November 29, 2007. Appropriate correction is required.

5. Claim 29 is objected to because of the following informalities: Examiner suggests replacing "the data block in line 2, with "the error data block" for clarity and in consistent with Amendment under 37 C.F.R. 1.116 dated November 29, 2007. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. **Claims 1,4,5,23,26-28,30-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sellin et al. (U.S. Pat No. 5,491,719) in view of Classon et al. (U.S. Pat No. 6,732,321).

With regard to claims 1 and 23 and 32, Sellin discloses

detecting an error in a data block **(identify blocks which have had errors)** which has passed an uplink radio section **(uplink) ("the MSC uplink error detector and handler 219 can identify blocks which have had errors introduced during the transmission", col. 5, lines 17-19)**;

inserting **(adding)** a cyclic redundancy check (CRC) code **(error detection code/CRC code)** into the data block **(data into the block format) (the base station block formatter 217 formats ... data into the block format 301 by adding ... the error detection code field 307", col. 5, lines 13-16; "the error detection code is a CRC code", col. 5, lines 2-3; see also CRC 307 in Fig. 3)**;

transmitting the data block with the CRC code to a receiving side **(MSC) (uplink transmitting from BS to MSC in Fig. 2)**; and

performing a concealment operation **(does not output the block)** on the error data block when the error data block is transmitted to and judged to be CRC fail in the receiving side **(an error being detected) ("in the event of an error being detected ..., the MSC uplink error detection and handler 219 does not output the block... ", col. 5, lines 28-31)**.

However, Sellin fails to explicitly show a CRC code that has a predetermined bit pattern which causes the downlink section to exclude the data block from being used as a basis for performing a downlink power control operation.

Classon discloses a CRC code **(CRC, col. 2, line 44)** that has a predetermined bit pattern **(predefined classification scheme, col. 3, line 61)** which causes the downlink section **(receiver, col. 2, line 54)** to exclude **(mute)** the data block from being used as a bases for performing a downlink power **(amplitude of a signal)** control operation **(mute)(mute the amplitude of the resulting ... signal, col. 5, lines 8-9)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a CRC code that has a predetermined bit pattern which causes the downlink section to exclude the data block from being used as a basis for performing a downlink power control operation as taught in Classon, with Sellin, to provide for adaptive multi-rate (AMR) for AMR systems. Classon, col. 2, line 33.

With regard to claims 4 and 26, Sellin discloses a CRC code **("the error detection code is a CRC code", col. 5, lines 2-3; see also CRC 307 in Fig. 3)** that is generated and inserted **(adding) (the base station block formatter 217 formats ... data into the block format 301 by adding ... the error detection code field 307", col. 5, lines 13-16)** by a base station system **(base station)** of a transmitting side.

With regard to claims 5 and 27, Sellin discloses a base station **(base station transceiver 103 in Fig. 1)**, a radio network controller **(base station controller 101 in Fig. 1)**, and a mobile switching center **(MSC in Fig. 1)**.

With regard to claim 28, Sellin discloses

a detector which detects that a data block passing an uplink radio section **(uplink)** includes an error **(identify blocks which have had errors) ("the MSC uplink error detector and handler 219 can identify blocks which have had errors introduced during the transmission", col. 5, lines 17-19)**; and

a controller which blocks transmission of the error data block without inserting a substitute data block in the error data block **(does not output the block) ("in the event of an error being detected ..., the MSC uplink error detection and handler 219 does not output the block... ", col. 5, lines 28-31)**.

However, Sellin fails to explicitly show wherein blocking transmission of the error data block generates a missing transmission sequence number that corresponds to the error data block that is detectable relative to other data blocks that are transmitted.

Classon discloses a missing transmission sequence number **(need not be declared)** that corresponds to the error data block **(bad frame) (a bad frame need not be declared if the CRC indicates that there is at least one decoded bit error, col. 7, lines 11-13)**.

At the of the invention, it would have been obvious to a person of ordinary skill in the art to include a missing transmission sequence number that corresponds to the error data block as taught in Classon to provide for adaptive multi-rate (AMR) for AMR systems. Classon, col. 2, line 33.

With regard to claim 30, the combination of Sellin and Classon discloses the system of claim 28. Sellin further discloses a base station system **(see base station controller 101 and base station transceiver 103 in Fig. 1)** of the transmitting side.

With regards to claim 31, the combination of Sellin and Classon discloses the system of claim 28. Sellin further discloses a base station **(base station transceiver 103 in Fig. 1)**, a radio network controller **(base station controller 101 in Fig. 1)**, and a mobile switching center **(MSC in Fig. 1)**.

8. **Claims 6,9,10,33** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sellin in view of Ohmi et al. (U.S. Pat No. 5,550,756), Suma et al. (U.S. Pat No. 4,680,763) and Classon.

With regard to claims 6 and 33, Sellin discloses

checking whether an error exists in a data block **(identify blocks which have had errors)** which has passed an uplink radio section **(uplink) ("the MSC uplink error detector and handler 219 can identify blocks which have had errors introduced during the transmission", col. 5, lines 17-19)**;

inserting **(adding)** a cyclic redundancy check (CRC) code **(error detection code/CRC code)** into the data block **(data into the block format) (the base station block formatter 217 formats ... data into the block format 301 by adding ... the error detection code field 307", col. 5, lines 13-16; "the error detection code is a CRC code", col. 5, lines 2-3; see also CRC 307 in Fig. 3)** if the data is detected to have an error **(the use of a CRC code is inherent to detect an error)**;

detecting the data block containing the CRC code on a receiving side **(MSC) (uplink transmitting from BS to MSC in Fig. 2)**; and

generating a CRC fail based on detection of the CRC code **(in the event of an error being detected) ("in the event of an error being detected ..., the MSC uplink error detection and handler 219 does not output the block... ", col. 5, lines 28-31)**.

However, Sellin fails to explicitly show reporting detection of an error to an image application and performing a concealment operation on the data block by the image application and a CRC code that has a predetermined bit pattern which causes the downlink section to exclude the data block from being used as a basis for performing a downlink power control operation.

Ohmi discloses reporting detection of an error **(detects an error) (the image receiving unit 111 comprises ... a receiving unit 22 ... , col. 9, lines 33-34, and a receiving unit 22 ... detects an error ..., col. 9, lines 47-48)** to an image application **(image receiving unit) (the image receiving unit 111 receives a data packet and reproduces an image from ... the received data packet, col. 9, lines 37-40)**. Suma discloses performing a concealment operation **(error concealment operation)** on the data block by the image application **(error concealment operation, col. 4, lines 7-8; see also error concealment circuit 53 in Fig. 4)**. Classon discloses a CRC code **(CRC, col. 2, line 44)** that has a predetermined bit pattern **(predefined classification scheme, col. 3, line 61)** which causes the downlink section **(receiver, col. 2, line 54)** to exclude **(mute)** the data block from being used as a bases for performing a downlink power **(amplitude of a signal)** control operation **(mute)(mute the amplitude of the resulting ... signal, col. 5, lines 8-9)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine 1) reporting detection of an error to an image application as taught by Ohmi, 2) performing a concealment operation on the data block by the image application as taught by Suma, and 3) a CRC code that has a predetermined bit pattern which causes the downlink section to exclude the data block from being used as a basis for performing a

downlink power control operation as taught by Classon, with Sellin, to eliminate bursty error due to fading which is unique to a radio line (Ohmi, col. 1,line 35), to reduce the probability that a reproduced data is judged to be erroneous (Suma, col. 4,lines 10-12), and to provide for adaptive multi-rate (AMR) for AMR systems (Classon, col. 2, line 33).

With regard to claim 9, the combination of Sellin and Ohmi discloses the method of claim 6. Sellin further discloses a CRC code **("the error detection code is a CRC code", col. 5, lines 2-3; see also CRC 307 in Fig. 3)** that is generated and inserted **(adding) (the base station block formatter 217 formats ... data into the block format 301 by adding ... the error detection code field 307", col. 5, lines 13-16)** by a base station system **(BS)** of a transmitting side.

With regard to claim 10, the combination of Sellin and Ohmi discloses the method of claim 9. Sellin further discloses a base station **(base station transceiver 103 in Fig. 1)**, a radio network controller **(base station controller 101 in Fig. 1)**, and a mobile switching center **(MSC in Fig. 1)**.

9. **Claims 11,13-22,29,34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sellin in view of Suma and Classon.

With regard to claims 11 and 34, Sellin discloses

checking whether an error exists in a data block **(identify blocks which have had errors)** which has passed an uplink radio section **(uplink) ("the MSC uplink error detector and handler 219 can identify blocks which have had errors introduced during the transmission", col. 5, lines 17-19)**;

inserting **(adding)** a cyclic redundancy check (CRC) code **(error detection code/CRC code)** into the data block **(data into the block format) (the base station block formatter 217 formats ... data into the block format 301 by adding ... the error detection code field 307", col. 5, lines 13-16; "the error detection code is a CRC code", col. 5, lines 2-3; see also CRC 307 in Fig. 3)** if the data is detected to have an error **(the use of a CRC code is inherent to detect an error)**;

detecting the data block containing the CRC code on a receiving side **(MSC) (uplink transmitting from BS to MSC in Fig. 2)**; and

generating a CRC fail based on detection of the CRC code **(in the event of an error being detected) ("in the event of an error being detected ..., the MSC uplink error detection and handler 219 does not output the block... ", col. 5, lines 28-31)**;

stopping a decoding operation on the data block **(does not output) ("in the event of an error being detected ..., the MSC uplink error detection and handler 219 does not output the block... ", col. 5, lines 28-31)**.

However, Sellin fails to explicitly show performing a concealment operation based on the CRC fail and a CRC code that has a predetermined bit pattern which causes the downlink

section to exclude the data block from being used as a basis for performing a downlink power control operation.

Suma discloses performing a concealment operation **(error concealment operation)** based on the CRC fail **(error) (error concealment operation, col. 4, lines 7-8; see also error concealment circuit 53 in Fig. 4)**. Classon discloses a CRC code **(CRC, col. 2, line 44)** that has a predetermined bit pattern **(predefined classification scheme, col. 3, line 61)** which causes the downlink section **(receiver, col. 2, line 54)** to exclude **(mute)** the data block from being used as a bases for performing a downlink power **(amplitude of a signal)** control operation **(mute)(mute the amplitude of the resulting ... signal, col. 5, lines 8-9)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine performing a concealment operation based on the CRC fail as taught by Suma, and a CRC code that has a predetermined bit pattern which causes the downlink section to exclude the data block from being used as a basis for performing a downlink power control operation as taught by Classon, with Sellin, to reduce the probability that a reproduced data is judged to be erroneous (Suma, col. 4,lines 10-12) and to provide for adaptive multi-rate (AMR) for AMR systems (Classon, col. 2, line 33).

With regard to claim 13, the combination of Sellin and Suma and Classon discloses the method of claim 11. Sellin further discloses a CRC code **("the error detection code is a CRC code", col. 5, lines 2-3; see also CRC 307 in Fig. 3)** that is generated and inserted **(adding) (the base station block formatter 217 formats ... data into the block format**

301 by adding ... the error detection code field 307", col. 5, lines 13-16) by a base station system **(BS)** of a transmitting side.

With regard to claim 14, the combination of Sellin and Suma and Classon discloses the method of claim 13. Sellin further discloses a base station **(base station transceiver 103 in Fig. 1)**, a radio network controller **(base station controller 101 in Fig. 1)**, and a mobile switching center **(MSC in Fig. 1)**.

With regard to claim 15, the combination of Sellin and Suma and Classon discloses the method of claim 11. Sellin further discloses an originating terminal **(mobile station 105 in Fig. 1)** and a radio network controller **(base station controller 101 in Fig. 1)**.

With regard to claim 16, the combination of Sellin and Suma and Classon discloses the method of claim 11.

Suma further discloses moving picture information **(image, col. 4, line 9)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine moving picture information as taught in Suma with Sellin to provide for images.

With regard to claims 17, Sellin discloses

detecting that data block which has passed an uplink radio section **(uplink)** has an error **(identify blocks which have had errors) ("the MSC uplink error detector and**

handler 219 can identify blocks which have had errors introduced during the transmission", col. 5, lines 17-19); and

blocking transmission of the error data block without inserting a substitute data block in the error data block **(does not output the block) ("in the event of an error being detected ..., the MSC uplink error detection and handler 219 does not output the block... ", col. 5, lines 28-31)**.

However, Sellin fails to explicitly show determining that the error data block has not been timely received by the receiving side based on an undetected transmission sequence number corresponding to the error data block; and performing a concealment operation on the data block not timely received.

Classon discloses determining that the data block has not been timely received by the receiving side based on an undetected **(need not be declared)** transmission sequence number corresponding to the data block **(bad frame) (a bad frame need not be declared if the CRC indicates that there is at least one decoded bit error, col. 7, lines 11-13)**. Suma discloses performing a concealment operation (**error concealment operation)** on the data block not timely received **(error) (error concealment operation, col. 4, lines 7-8; see also error concealment circuit 53 in Fig. 4)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine determining that the data block has not been timely received by the receiving side based on an undetected transmission sequence number corresponding to the

data block as taught by Classon, and performing a concealment operation on the data block not timely received as taught by Suma, with Sellin, to reduce the probability that a reproduced data is judged to be erroneous (Suma, col. 4,lines 10-12) and to provide for adaptive multi-rate (AMR) for AMR systems (Classon, col. 2, line 33).

With regard to claim 18, the combination of Sellin and Suma and Classon discloses a method of claim 17. Sellin further discloses a base station system **(see base station controller 101 and base station transceiver 103 in Fig. 1)** of the transmitting side.

With regards to claims 19 and 31, the combination of Sellin and Suma and Classon discloses a method of claim 17 and a system of claim 28. Sellin further discloses a base station **(base station transceiver 103 in Fig. 1)**, a radio network controller **(base station controller 101 in Fig. 1)**, and a mobile switching center **(MSC in Fig. 1)**.

With regard to claim 20, the combination of Sellin and Suma and Classon discloses the method of claim 17. Sellin further discloses an originating terminal **(mobile station 105 in Fig. 1)** and a radio network controller **(base station controller 101 in Fig. 1)**.

With regard to claim 21, the combination of Sellin and Suma and Classon discloses the method of claim 17.

Suma further discloses moving picture information **(image, col. 4, line 9)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include moving picture information in Suma in Sellin. The suggestion/motivation for doing so would have been to provide for images. Suma, col. 4,line 9. Therefore, it would have been obvious to combine Suma with Sellin for the benefit of moving picture information, to obtain the invention as specified in claim 21.

With regard to claim 22, the combination of Sellin and Suma and Classon discloses the method of claim 17. Sellin further discloses a data transmission to the receiving terminal that is performed based on a circuit network transmission method **(PCM link 107, col. 2, line 57-58)**.

With regard to claim 29, the combination of Sellin and Classon discloses the system of claim 28. However, the combination fails to show a detector at a receiving side that determines that the error data block corresponding to the missing transmission sequence number has not been timely received, and performing a concealment operation on the data block not timely received.

Suma discloses determining that the error data block **(CRC)** corresponding to the missing **(need not be declared)** transmission sequence number has not been timely received **(bad frame) (a bad frame need not be declared if the CRC indicates that there is at least one decoded bit error, col. 7, lines 11-13)**, and performing a concealment operation (**error concealment operation)** on the data block not timely received **(error)**

(error concealment operation, col. 4, lines 7-8; see also error concealment circuit 53 in Fig. 4).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine determining that the error data block corresponding to the missing transmission sequence number has not been timely received as taught by Classon, and performing a concealment operation on the data block not timely received as taught by Suma, with Sellin, to provide for adaptive multi-rate (AMR) for AMR systems (Classon, col. 2, line 33) and to reduce the probability that a reproduced data is judged to be erroneous (Suma, col. 4,lines 10-12).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BW

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January 9, 2007

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